AVIAN/PANDEMIC FLU NEWSLETTER

THE OFFICIAL AVIAN INFLUENZA NEWSLETTER OF HEALTH AND HUMAN SERVICES AGENCY

FLU:Pandemic/Bird Plan. Prepare. Protect.
County of San Diego

www.sdbirdflu.org

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Avian Influenza: Current Global Situation Update

AVIAN INFLUENZA CASES IN HUMANS

Since January 2004, the World Health Organization (WHO) has reported human cases of Avian Influenza A/ (H5N1) in more than twelve countries including Cambodia, China, Indonesia, Thailand, Vietnam, Azerbaijan, Turkey, Egypt, Djibouti, Iraq, Lao People's Democratic Republic, and Nigeria.

http://www.cdc.gov/flu/avian/latestupdate.htm

Cumulative Number of Confirmed Human Cases of Avian Influenza A/ (H5N1) Reported to WHO through June 29, 2007. WHO only reports laboratory-confirmed cases.

- Total human cases of H5N1 (confirmed) = **317**
- Total human deaths from H5N1= **191**

http://www.who.int/csr/disease/avian_influenza/cases_table_2007_04_11.html

Currently, there are no reported human OR animal cases of the highly pathogenic Avian Influenza (H5N1) in United States.

Viet Nam - *June 29, 2007*
The Ministry of Health has confirmed two new human cases of influenza A(H5N1) virus infection, the first human cases to have been reported from Viet Nam since November 2005. Both cases have been confirmed by the National Institute of Hygiene and Epidemiology (NIHE) and by the WHO H5 Reference Laboratory, US Centers for Disease Control and Prevention (CDC).

The first case is a 29 year old male from Vinh Phuc Province. He developed symptoms on May 10th some days after slaughtering poultry for a wedding. He was admitted to hospital on May 15th and was discharged on June 11th.

The second human is a 19 year old male from Thai Nguyen Province. He developed symptoms on May 20th following exposure to poultry at a slaughter house. He was admitted to hospital on May 25th and remains in hospital in a stable condition.

To date, there has been no evidence of an epidemiological link between the human cases, and no evidence of infection in close contacts of the cases.
These human cases have coincided with a large number of new poultry outbreaks of highly pathogenic avian influenza reported in Viet Nam during May and June this year. Of the 95 cases confirmed to date in Viet Nam, 42 have been fatal.

Indonesia - *June 25, 2007*
The Ministry of Health has announced a new case of human infection of H5N1 avian influenza. A 3-year-old female from Riau Province developed symptoms on June 18th and has since recovered. Investigations into the source of her infection indicate exposure to sick and dead poultry. Of the 101 cases confirmed to date in Indonesia, 80 have been fatal.

Egypt - *June 25, 2007*
The Ministry of Health and Population has confirmed a new human case of avian influenza A (H5N1) virus infection. The case has been confirmed by the Egyptian Central Public Health Laboratory and by the WHO H5 Reference Laboratory, US Naval Medical Research Unit No.3 (NAMRU-3).

SPECIAL POINTS OF INTEREST:

- **Cumulative Number of Confirmed Human Cases**
- **New H5N1 Timeline**

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AVIAN INFLUENZA CASES IN HUMANS (Cont.)

The case is a 4 years old male from Qena Governorate. He developed symptoms on June 20th and was admitted to hospital on June 21st. He is receiving treatment and is in a stable condition. Initial investigations into the source of his infection indicate exposure to dead poultry. Of the 37 cases confirmed to date in Egypt, 15 have been fatal.

AVIAN INFLUENZA CASES IN POULTRY AND WILD BIRDS

Update on Avian Influenza in animals (Type H5) as of June 27, 2007

Since June 2007, 23 countries have reported cases of H5N1.
http://www.oie.int/.htm

H5N1 Timeline (new!)

http://www.oie.int/eng/info_ev/en_factoids_H5N1_Timeline.htm

UNITED NATIONS NEWS

Many countries are today better prepared to respond to bird flu outbreaks.

Food and Agriculture Organization of the United Nations
FAO Newsroom —June 27, 2007

The response to the deadly H5N1 virus in poultry has significantly improved over the past three years, but the virus remains entrenched in several countries and will continue to spread, said FAO's Chief Veterinary Officer Joseph Domenech .

Reports of human cases occur only very sporadically, apart from Egypt and Indonesia, following the progressive control of H5N1 in poultry. "This achievement is the most important demonstration of the effects of worldwide efforts to contain the H5N1 virus," Domenech said.

"In the 15 or so countries in Asia, Eastern Europe and the Middle East, where the H5N1 virus was introduced during the past six months, it was rapidly detected and eliminated or controlled. Most affected countries have been very open about new outbreaks. This shows that countries are taking the H5N1 threat seriously. They are better prepared today and have improved their response systems," Domenech said at a press conference in Rome on the occasion of the Technical Meeting on Highly Pathogenic Avian Influenza and Human H5N1 Infection.

But Domenech also stressed that there should be absolutely no reason for complacency. "Recent H5N1 outbreaks in Bangladesh, Ghana, Togo, the Czech Republic and Germany are a clear reminder that the virus still succeeds in spreading to new or previously already infected countries," Domenech said. A potential human influenza pandemic can not be ruled out as long as the virus continues to exist in poultry.
There are still some serious concerns with the global disease situation particularly with regard to Egypt, Indonesia or Nigeria. "Even if bird flu has disappeared from our TV screens, it doesn't mean that the risk is over. Avian influenza is not a one time event -- the international community will have to live with the disease for several years to come," he added.

A long-term presence of the virus will require a long-term financial and political commitment from governments and the international community to finally contain and eradicate the virus. "What makes the battle against avian influenza so difficult are the many high risk poultry production and marketing practices that still continue in many countries," Domenech said. Indonesia, for example, has more than 13 000 live poultry markets where birds from different origins are mixed. Unless those practices are modified or changed, the risk of recurrent infection remains high.

"The socially and economically equitable adjustment of poultry production and marketing systems for safer product supply is essential to reduce infection risks. Without forgetting that efficient veterinary services and improved private public partnership for better surveillance and control activities remain indispensable," Domenech said. He called for intensified monitoring of virus circulation particularly in countries that are using poultry vaccines. "The H5N1 virus is not stable and keeps constantly changing. On one occasion in China last year a new virus strain appeared with different immunologic characteristics which made it necessary to modify the vaccines used in the region concerned. This emergence of a new strain may have happened again more recently in Indonesia," he said.

http://www.fao.org/newsroom/en/news/2007/1000615/index.html

NATIONAL NEWS

Government Accountability Office (GAO) - *June 11, 2007*

The Government Accountability Office (GAO) The GAO, Congress's investigative agency, issued two reports that address avian and pandemic influenza planning: one examining how well the US Department of Agriculture (USDA) is prepared to respond to avian flu outbreaks and the other assessing efforts by US and international agencies to help vulnerable countries.

The first report, which examines how well the US Department of Agriculture (USDA) is prepared to respond to avian flu outbreaks, was sent to congressional committees on June 11. The GAO based its conclusions on a review of federal response plans and regulations, visits to poultry operations, interviews with federal, state, and industry officials in five states that have experienced other types of avian flu outbreaks, and a review of 19 state plans. The 60-page report emphasizes the importance of USDA's avian flu plans. "A well-planned, coordinated emergency response is essential when dealing with highly pathogenic AI [avian influenza] in order to mitigate financial losses to the $28 billion US poultry industry," the report says. "The US is the world's largest producer and the second largest exporter of poultry meat."

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AVIAN FLU IN THE MEDIA

The Jakarta Post.com - *July 2, 2007*

Around 80 percent of the total 111 bird flu (Avian Influenza) patients in Indonesia, between 2005 and June 2007 have died, an official said. During the period, some 90 people died of bird flu virus in the country, head of the respiratory disease of the Health Ministry's Community and Environmental Disease Eradication Fonny Silvanus said over the weekend.

The majority of the fatalities were recorded in West Java Province with 29 deaths, and the least fatalities were in South Sulawesi with only one bird flu patient died, Silvanus said when launching a public awareness campaign on animal quarantine.

"At the average, bird flu virus has affected mostly Indonesia's western regions, because the regions are quite humid, which is an ideal condition for bird flu virus to breed well," Silvanus said. The bird flu patients ranged from one year old babies to 67 year-old adults.

http://www.thejakartapost.com/detailgeneral.asp?fileid=20070702143601&irec=4

Bloomberg.com - *June 27, 2007*

German authorities are testing the carcasses of four birds to determine whether they carried the H5N1 strain of avian flu after the virus was found in nine cases in the country in the past three days.

Six birds infected with the virus were found dead in the southern state of Bavaria and three in the eastern state of Saxony, developments that Agriculture Minister Horst Seehofer called ``surprising.'' Federal and regional governments are taking steps to prevent infection of domestic poultry. The government has not raised the alert level.

The three birds discovered near the German city of Nuremberg June 24 are the European Union's first cases of H5N1 in wild birds this year. In 2006, it was detected in more than 700 wild birds in the EU.
Avian influenza was first detected in Germany on the Baltic Sea island of Ruegen in February 2006, with the first case detected in domestic poultry six months later. Worldwide H5N1 has caused the deaths of almost 300 million farm birds in 60 countries.

http://www.bloomberg.com/apps/news?pid=20601100&sid=a0rfqvFB3KU0&refer=germany

Journal Watch Infectious Diseases - *June 27,2007*

Summary: Monoclonal antibodies generated from B cells of patients who had survived H5N1 influenza were efficacious in preventing and treating H5N1 infection in a mouse model.

Description: Although currently circulating H5N1 viruses are not efficiently transmitted from person to person, H5N1 influenza remains a major global threat. New treatment strategies are urgently needed. Now, researchers (one of whom is named on a patent relating to the generation and use of human monoclonal antibodies) have generated anti-H5N1 monoclonal antibodies (mAbs) from B-cells of four Vietnamese patients who survived H5N1 infections. They selected four mAbs that demonstrated broad in vitro neutralizing activity against H5N1 and tested their prophylactic and therapeutic efficacy in BALB/c mice. These animals are highly susceptible to infection with the H5N1 viruses isolated in Asia in 1997 and since 2003.

Two mAbs were tested for pre-exposure prophylactic efficacy against an H5N1 Clade I virus isolated in Vietnam in 2004. Both conferred protection from lethal infection, although one showed greater activity than the other. Further analysis revealed that the mAbs confer protection by limiting viral replication in the lung, attenuating virus-induced lung pathology, and blocking extrapulmonary dissemination of virus. All four mAbs provided robust protection against lethality when administered up to 72 hours after experimental infection with the H5N1 Clade I strain circulating in Vietnam in 2004; three of the four mAbs also showed therapeutic efficacy against an antigenically divergent H5N1 Clade II strain isolated in Indonesia in 2005. None of these mAbs showed activity against an H3N2 influenza virus.

Comment: Prophylaxis or treatment of H5N1 influenza with cloned human mAbs offers several advantages: It is based on antibodies of human origin, generated in response to the naturally occurring pathogen, thus improving tolerability; screening for the optimal mAb is easy; the technology is established; and large amounts of pure mAbs can be made relatively quickly. Using a cocktail of several mAbs with broad cross-reactivity against multiple epitopes of H5N1 viruses could suppress viral evasion of this form of immune therapy. Further testing of this promising concept will define the role of mAbs in our armamentarium against pandemic influenza. — Thomas Glück, MD

http://infectious-diseases.jwatch.org/cgi/content/full/2007/627/1?

Original Article:
Simmons CP et al. Prophylactic and therapeutic efficacy of human monoclonal antibodies against H5N1 influenza. PLoS Med 2007 May 29; 4:e178 http://www.pubmed.gov

BusinessWire.com - *June 27,2007*

Commonwealth Biotechnologies Inc., announced that it has been approved by the Department of Health and Human Services under the Select Agent Programs of the Centers for Disease Control and Prevention and the Animal and Plant Health Inspection Service to carry out work on the highly pathogenic avian influenza. The approval allows CBI to possess and use the virus within the United States.

In order to be granted approval under this tightly regulated government program, CBI had to establish rigorous containment and safety procedures in its Biosafety Level 3 laboratories. Dr. Richard J. Freer, Chairman and COO of CBI and the Responsible Official for the CDC/APHIS registration commented, “Few non-governmental entities have the facilities and expertise to perform avian flu research with the live virus.” This approval will allow CBI to offer laboratory facilities to a number of companies previously constrained by not being able to develop and test their products against the actual virus.

http://home.businesswire.com/portal/site/google/index.jsp?ndmViewId=news_view&newsId=20070627005119&newsLang=en

Announcements

San Diego's Pandemic Education Campaign is live! View current Public Service Announcements at: http://www.modern-day.com/PanFlu/player/player.htm

Southern California Collaborative Meetings
Representatives from local health jurisdictions from Southern California will meet July 25 to address risk communication and community containment preparedness.

NATIONAL NEWS Continued from Page 2:

Government Accountability Office (GAO) - *June 20, 2007*
In the second report, the GAO detailed progress the United States and the international community have made toward identifying countries' pandemic risk and providing the most vulnerable countries with resources for pandemic prevention efforts.

The United States has taken a lead role in improving global avian and pandemic flu preparedness, committing the largest share of funds through 2006: about $377 million, which is 27% of the $1.4 billion pledged by all donors.

GAO report on global influenza planning at: http://www.gao.gov/new.items/d07604.pdf

Resources

- **County Vector Control Program's (888) 551-INFO (4636)** for info on how to protect birds, or to report dead birds.
- **HHSA's Avian and Pandemic Flu Info Line (619) 515-6900** for info regarding avian and pandemic flu.
- Educational materials are available for public distribution and are also downloadable from the county website: www.sdbirdflu.org or www.sdpandemicflu.org. Click on "Pandemic Flu".
- National Geographic International Edition: www.nationalgeographic.com
- World Health Organization (WHO): www.who.int
- Federal Dept. of Health & Human Services: www.pandemicflu.gov
- Federal CDC site: www.cdc.gov/flu/pandemic
- State of California: www.dhs.ca.gov

COUNTY OF SAN DIEGO
Health and Human Services Agency

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HEALTH AND HUMAN SERVICES AGENCY
PHS
Public Health Services

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